CALIFORNIA ENERGY COMMISSION

How We Survived the Summer of 2001

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Forecasts for California's Summer '01

- **"NERC's best estimate is that there will be about 260 hours" of rolling blackouts. National Electric Reliability Council. 5/01**

- **Rolling blackouts will be "in the hundreds of hours. I expect Californians will grow pretty weary of them pretty quickly". Michael Zenker, Director of Cambridge Energy Research Associates. 5/9/01**

Summer '01 Projection

February 2001

Temperature Probability	1-in-10
Peak Demand + 7% Operating Reserve	61,125
Firm In-State Generating Capacity	54,375
Firm Imports	4,841
Available Generation Capacity	59,216
Estimated Outages	3,050
Dependable Generation Capacity	56,166
Surplus / Deficit	—4,959

What happened - Summer '01

- **Good news**
  - Even though there were six blackouts between Jan. 1 to May 8, 2001, the West had no black-outs in the summer.
  - After June 1, 2001 only two Stage I and two Stage II alerts
  - Only six days of ISO load greater than 40,000 MW. Compared to 29 days in 2000
- **Bad news**
  - Without emergencies demand responsive loads could not be tested

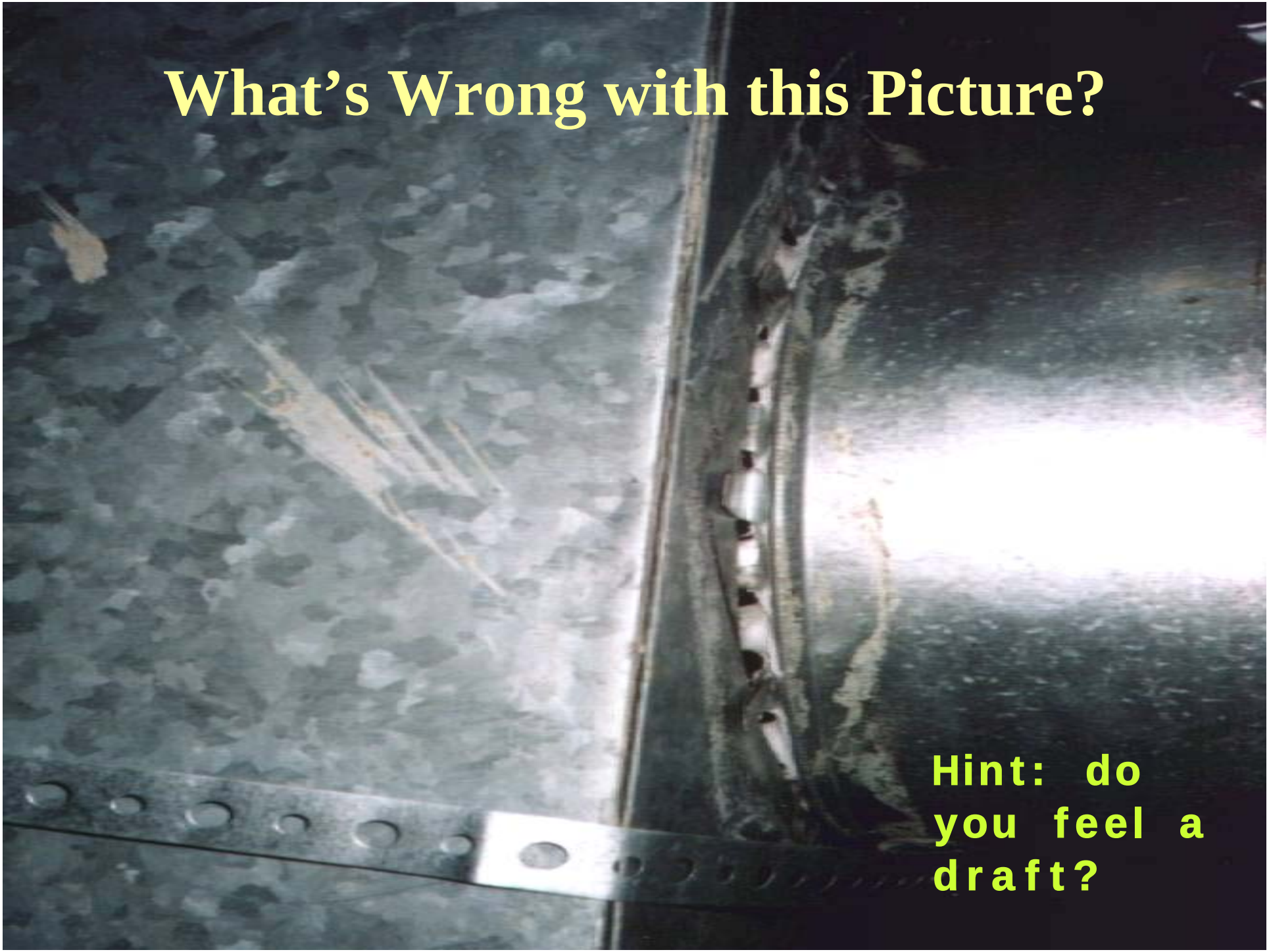
What Reduced Demand

- Updated Efficiency Standards
- Rebate/Incentive Programs
- Public Awareness Campaign
- Business Partnerships
- Earned Media
- Retail Rate Increases
- 20/20 Rebates

Update Efficiency Standards

- **AB 970 required the Energy Commission to update its building standards in 120 days**
- **Standards adopted in 119 days**
- **Solved the Duct Tape Problem! (it works on everything but ducts)**
- **Will reduce demand by 200 MW a year - 10 years 2,000 MW**

What's Wrong with this Picture?



New Funding - PUC Programs

Measure	2001 Funding ($Mil)	9/1/01 MW Saved	7/1/02 Projected Savings
Summer Peak Initiative	$67.0	124	124
Appliance Rebates	$50.0	58	100
Commercial Lighting Retrofits	$35.0	37	60
Low-Income Weatherization and Appliance Rebates	$45.0	8	12
	$197.0	227	296

New Funding - CEC Programs

Measure	5x/29x Funding ($Mil)	9/30/01 MW Saved	Projected Savings 7/1/02
LED Traffic Signals	$10.0	6	8
Innovative Programs	$48.0	34	95
Demand Responsive Buildings	$48.0	122	186
Cool Roofs	$23.9	2	20
State Bldgs. And Public Univ.	$5.5	51	51
Water/Wastewater	$16.3	53	56
Municipal Utilities	$40.0	45	59
Agriculture	$87.1	30	35
Local Government Loans	$49.5	1	5
Real Time Meters	$34.0	31	470
	$362.3	375	985

LEDs & SolaTubes

State Bldgs. & Cool Roofs

Real Time Meters & Local Gov't Loans

Bovine and Landfill Gas

New Funding - Other Programs

Measure	Cost ($Mil)	MW Goal	Saved 9/1/01
Public Awareness, 20/20, Rates, etc.	$50.0	1,000	4,016
Classroom Outreach	$7.0	NA	0
Other Low Income	$220.0	NA	0
Renewable Projects	$99.5	41	0
State Energy Projects.	$35.0	40	0
Mobile Efficiency Brigade	$40.0	100	40
State, Fed. & Local. Govt. Response	?	658	658
AC Cycling	?	319	300
ISO/CPUC Demand/Curtailment	?	740	735
Demand Bidding Program	?	279	0
CPUC Interruptible Tariff Program	?	826	1,280
	$451.5	2,901	7,029

CCC Hands Out 1.8 Million Compact Fluorescent Lamps!

Paid Media Campaign

- Television, Radio and Print
- Designed to reach 84% of Californians 20 times over the summer
- English, Spanish, Mandarin, Cantonese, Vietnamese & Korean
- Reached 95% of all adults an average of 25 times

Earned Media

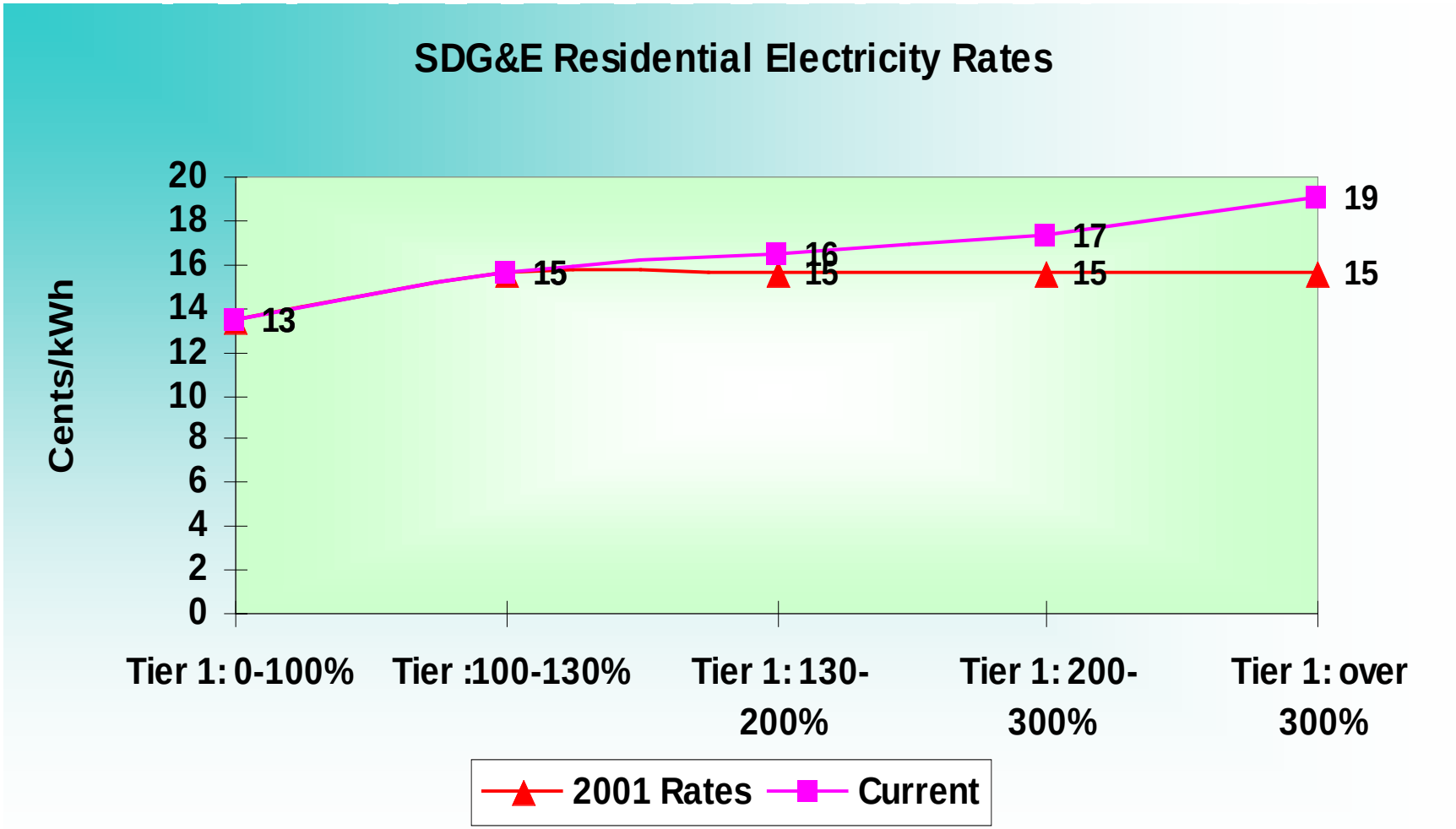
- Energy crisis on front page of every major newspaper almost every day
- Lead story on state and national TV news
- Energy nerds became minor celebrities
- 56% said electricity is the most pressing issue facing the state (PPIC)

Time Differentiated Rates

- All IOU customers over 500 kW already on TOU rates
- Energy Commission is installing 23,000 real time meters for all customers greater than 200 kw
- PUC requires all customers who get the new meter be switched to TOU rates

SDG&E Retail Rates Effective 6/1/01

Residential Electricity Prices & % kWh Over Baseline



PG&E Retail Rates Effective 6/1/01

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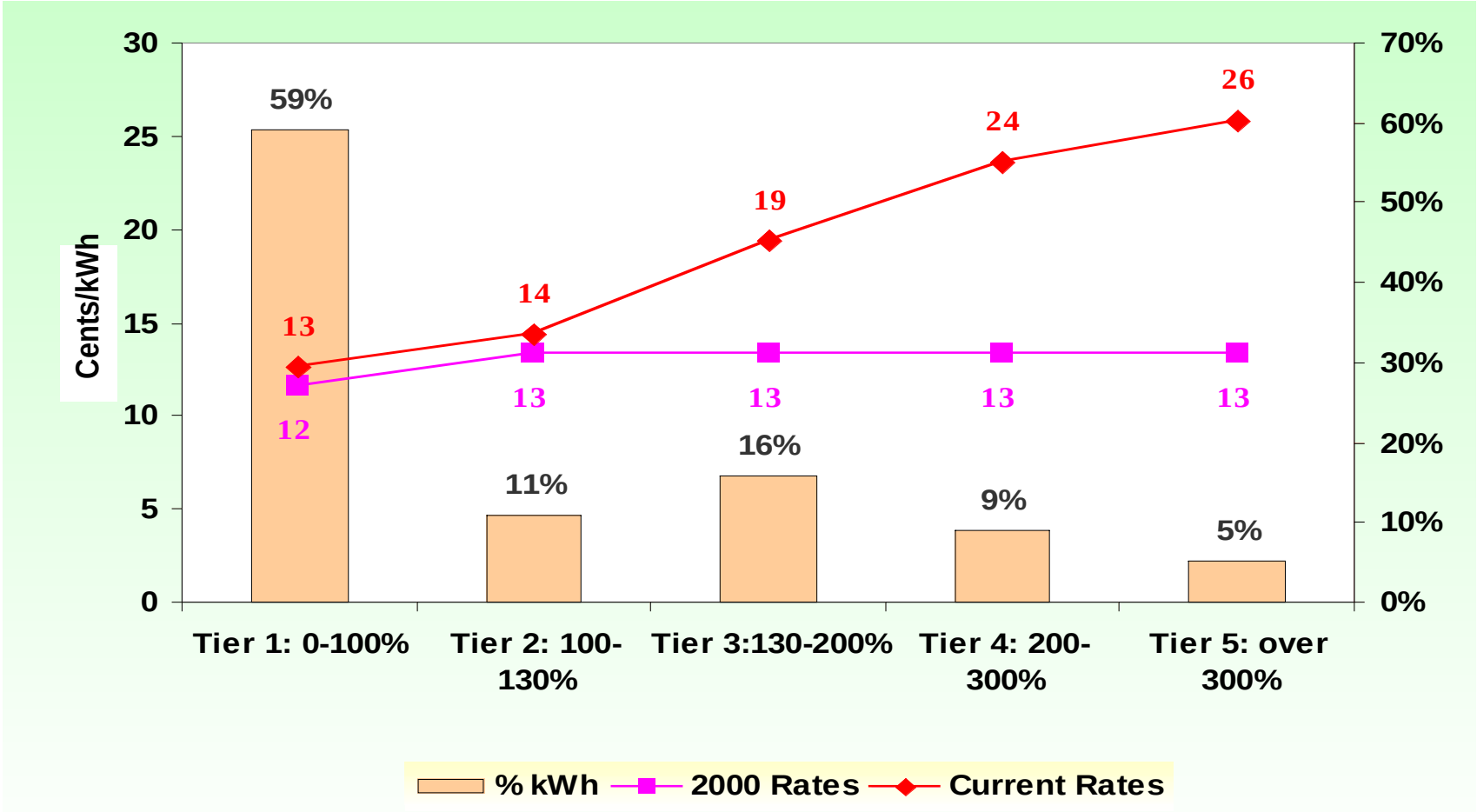


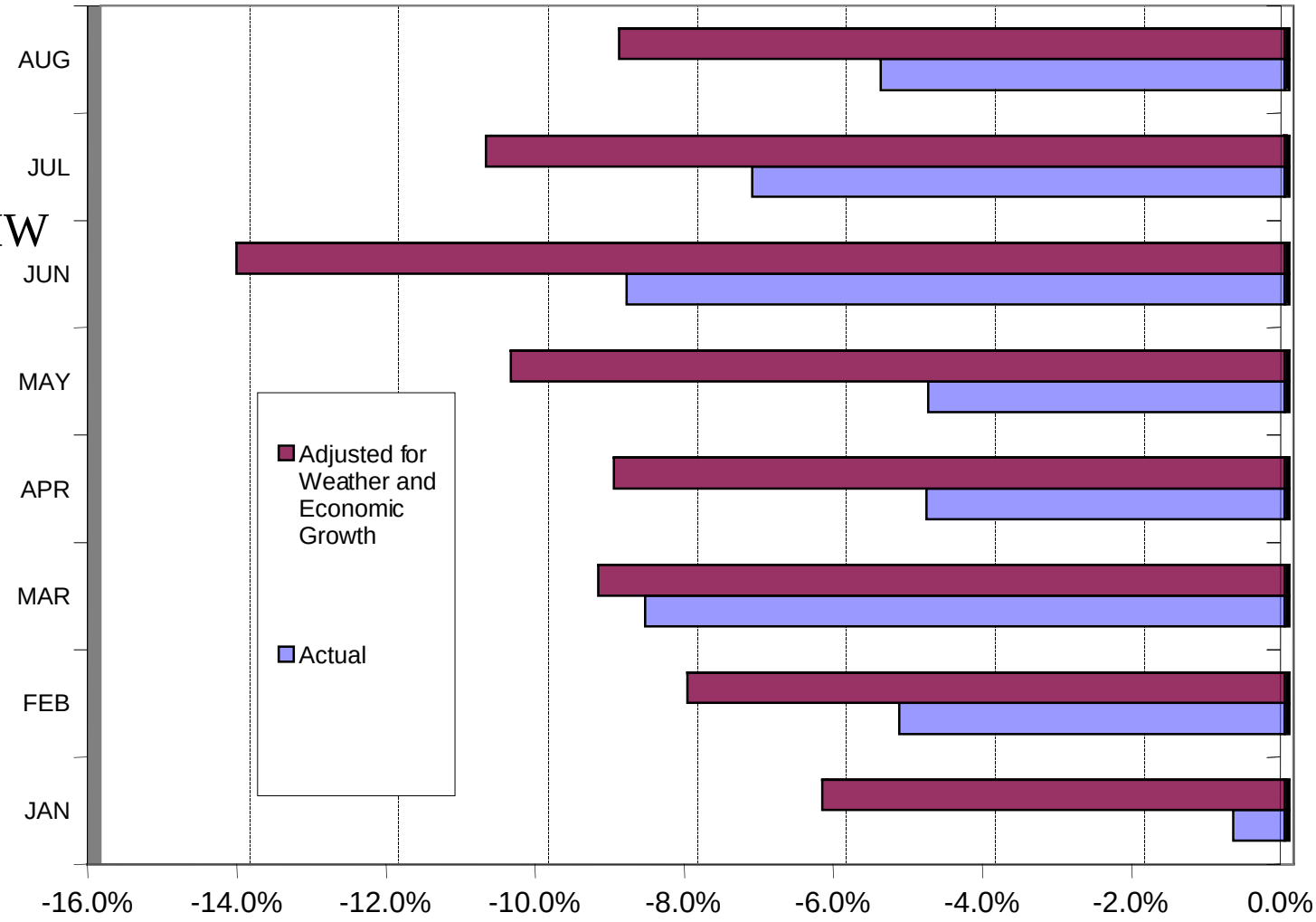
20/20 Rebate

- 20% rebate on electricity bill for consuming 20% less than last year
- IOU's only
- June through Sept.
- Based on total energy consumption for Residential
- Peak for NonRes. on TOU rates

Peak Demand Reduction in 2001

(Percent Change 2000 to 2001)

5,570 MW



Was it Just the Weather?

Similar Summers

Cooling Degree Days : 2001 - 2000

	2000	2001	Difference
Los Angeles	119	84	-35
Burbank	330	341	11
San Bernardino	624	680	56
Fresno	710	872	162

Was it Just the Weather?

Two Similar Days

Year	2000	2001
Date	Wednesday August 2	Friday August 17
Temperature (ºF)		
San Francisco	73	73
Sacramento	100	100
Los Angeles	87	83
Peak Demand (MW)	44,906	40,384

Meeting the 5,000 MW Goal

August 1, 2001

Generation

- Increased output from existing plants — **505 MW**
- Accelerate construction of approved plants — **1,365 MW**
- Develop new peaking and renewable plants — **460 MW**

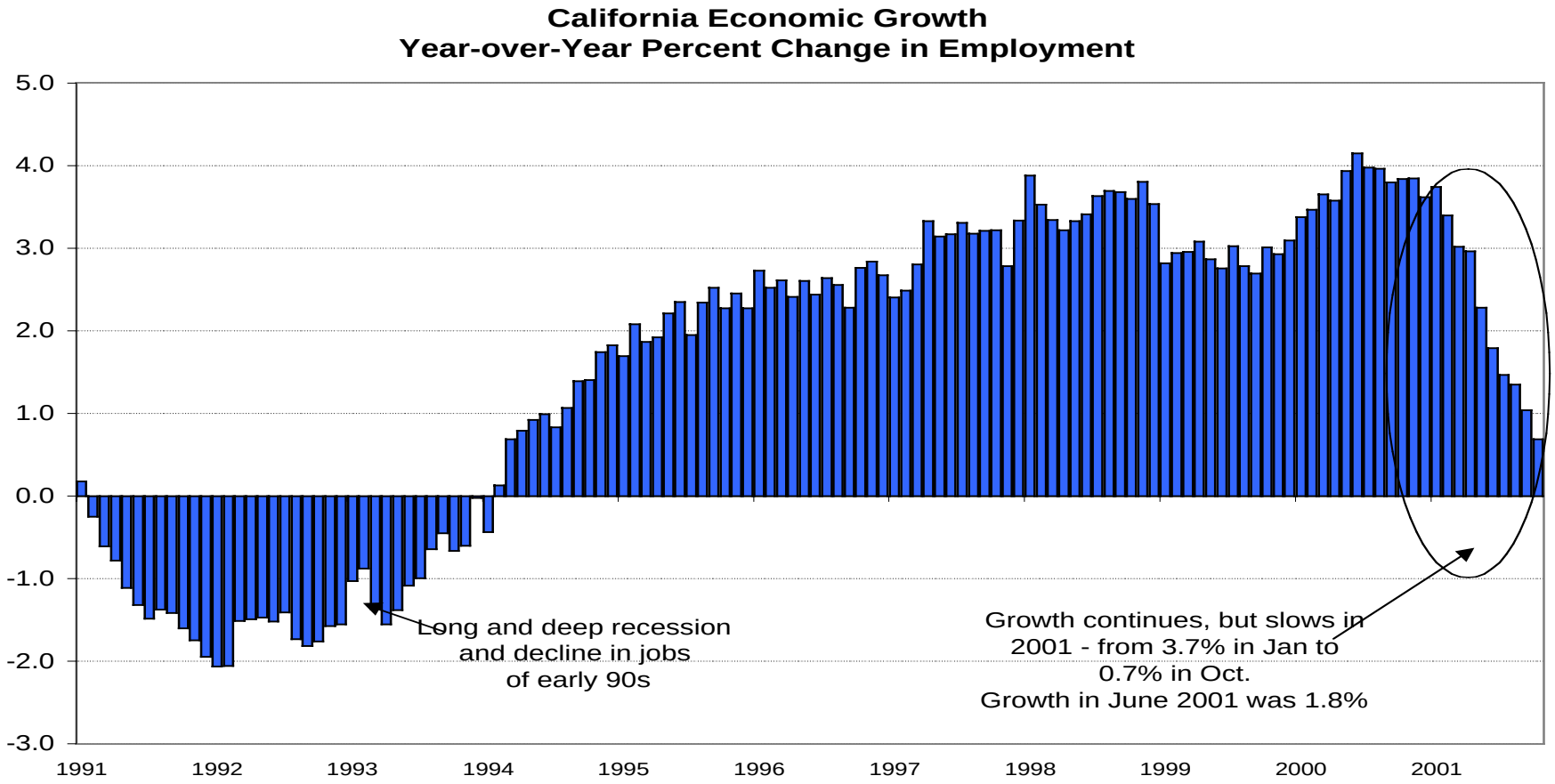
Total 2,330 MW

Conservation

- Update Efficiency Standards — **200 MW in 2002**
- Expansion of Rebate/Incentive and Demand Responsive Programs — **3,629 MW**
- Maximize Voluntary Conservation — **4,016 MW**

Total 7,645 MW

California Economy was Growing in the Summer of 2001



Consumer Demand Reduction Evaluation-residential

- Loren Lutzenhiser, Washington State U.
- 1,700 residential telephone surveys
- Several hundred in-depth interviews
- A follow-up survey of all 1,700 next summer
- Preliminary Results

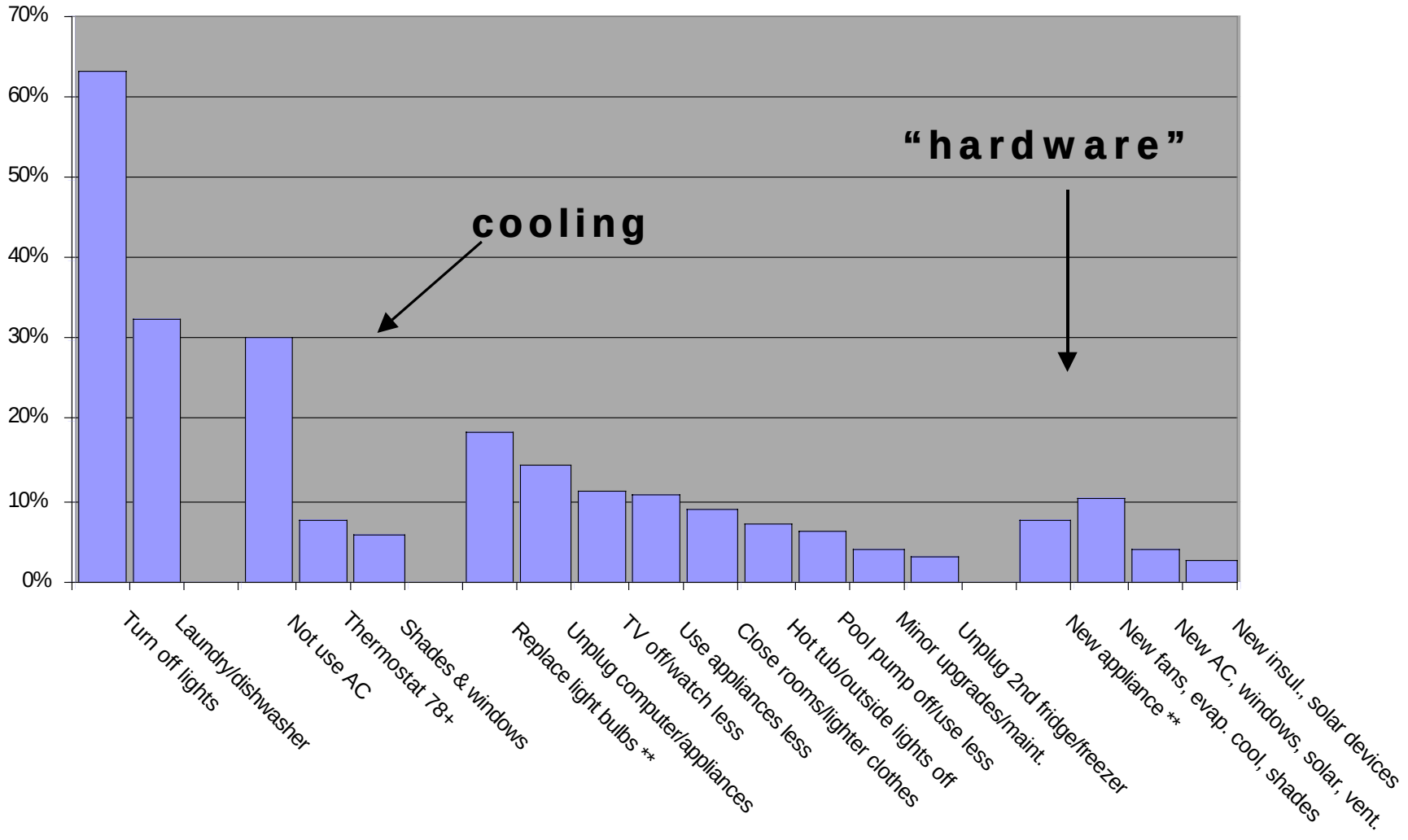
How Many Households Conserved?

- About 79% of households reported some actions
- But about 37% were responsible for the majority of the savings

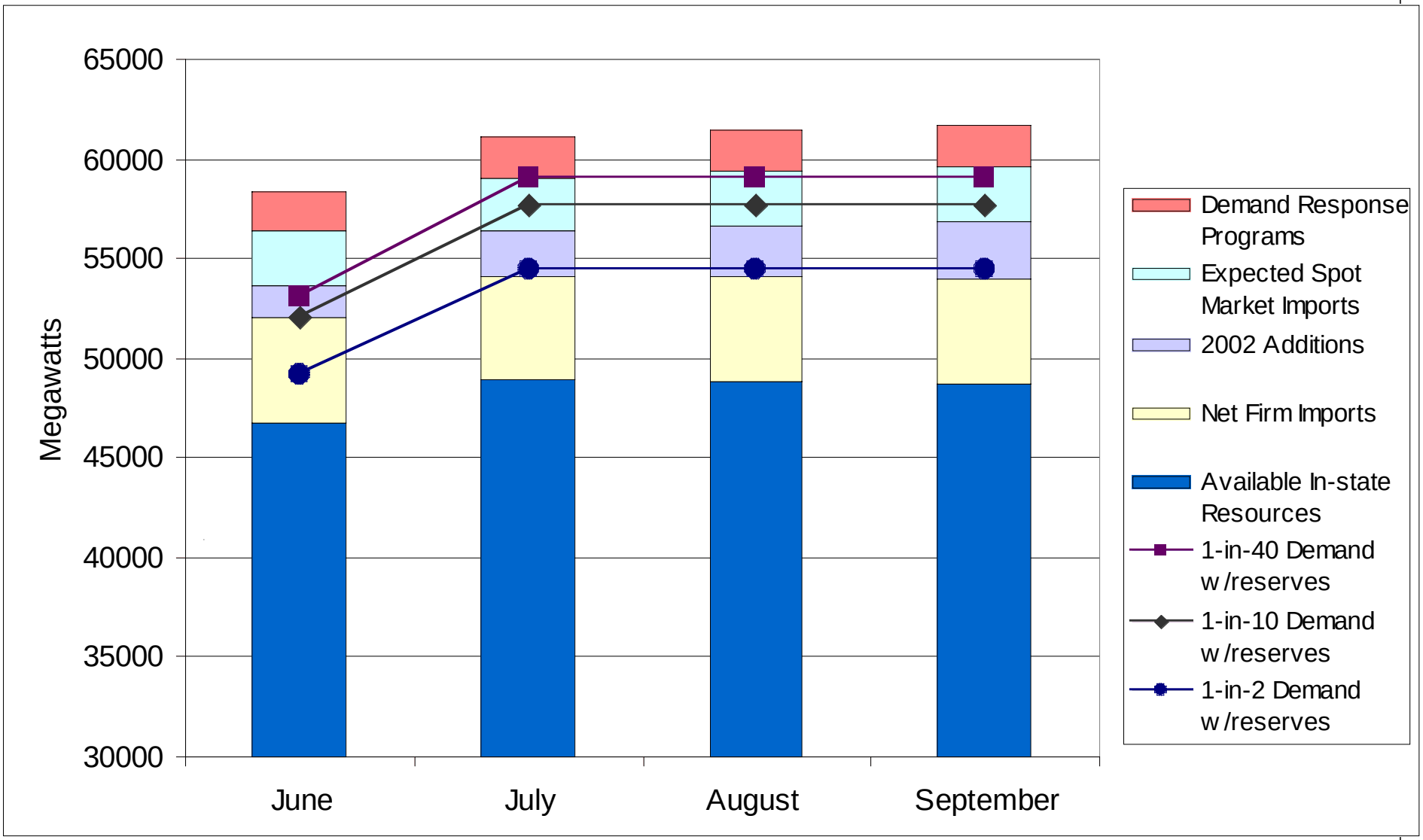
The Most Important Motivations?

	Very Important
To Stop Energy Suppliers from Overcharging	79%
Using Energy Resources Wisely	78%
Keeping Bills Down	77%
Trying to Avoid Blackouts	77%
Doing Our Part	69%
Qualify for Utility Rebate	33%

Household Conservation Actions



CEC Supply/Demand Projections



Projections for Summer of 2002

Peak Demand Reduction in California Voluntary and Program (Megawatts)